

ARE ADULT LONCHAEIDAE (DIPTERA) SPECIALIZED KLEPTOPARASITES OF SPIDERS' PREY?

JOHN R. DOBSON

H+R Environmental Investigations Ltd, Netley House, Gomshall, Surrey GU5 9QA.

While collecting and photographing Diptera at Botany Bay Forestry Commission Reserve, Surrey on 14.vii.1991 I observed a female lonchaeid, *Lonchaea chorea* (F.) feeding on the partially decayed corpse of the common earwig *Forficula auricularia* L. The earwig corpse was in a web, spun between two oak leaves, of the theridiid spider *Enoplognatha ovata* (Clerck) (Plate I, Figure 3).

On inspecting the same web approximately half an hour later, a further lonchaeid, a male of *Lonchaea laticornis* Meig. was observed feeding on the corpse of the earwig. The spider was in close attendance on both occasions, and *L. laticornis* was seen to walk to a position beneath the lower leaf and out of line of sight of the spider in order to clean itself.

On 8.viii.1991, in a domestic garden at Witley, Surrey I observed a female of the lonchaeid *Setisquamalonchaea fumosa* (Egger) inspecting an orb web spun on hogweed *Heracleum sphondylium* L. There was a corpse of a spider in the web, and the fly was seen to examine the web in flight, zig-zagging horizontally through an arc of 2–3 cm; and 'on foot' repeatedly landing on the hogweed plant and facing in the direction of the web. Eventually the fly commenced a cautious approach to the dead spider, walking slowly across the web. Ultimately it started to feed on the spider. Approximately one hour later a further lonchaeid was seen feeding on the same spider. This latter, however, evaded capture.

Among the Diptera, members of the family Milichiidae are known to ride on crab-spiders (Thomisidae) from where they are able to feed on the spiders' prey. Examples of Empididae, Anthomyiidae and Scatophagidae have also been recorded as feeding on prey in spiders' webs (Irwin, 1978). It is unclear, however, whether the members of these latter three families were exhibiting opportunistic or specialized behaviour.

The above observations might suggest a consistent specialized behaviour pattern; four individuals comprising at least three species were seen on two separate occasions. I would also draw attention to the investment in time and energy displayed by

Plate I.

1–2. Some horticultural pests new to Britain in recent years. A. J. Halstead. 1992. *Br. J. Ent. Nat. Hist.* 5: 41–47. 1. Egg masses of the hydrangea scale insect, *Pulvinaria hydrangeae*. 2. Damage to *Primula obconica* flowers caused by the western flower thrips, *Frankliniella occidentalis*. Photos A. J. Halstead.

3. Are adult Lonchaeidae (Diptera) specialized kleptoparasites of spiders' prey? J. R. Dobson. 1992. *Br. J. Ent. Nat. Hist.* 5: 33–34. *Lonchaea chorea* feeding on a dead earwig in a web between two oak leaves spun by the theridiid spider *Enoplognatha ovata*. Photo J. R. Dobson.

4. Behaviour of larval and adult *Leucopis* (Diptera: Chamaemyiidae). I. F. G. McLean. 1992. *Br. J. Ent. Nat. Hist.* 5: 35–36. A female adult *Leucopis* 'milking' aphids for honeydew on a sallow shoot. The fore tarsi are stroked over the dorsal surface of the aphids to stimulate production of honeydew. Photo I. F. G. McLean, Pentax MX with 100 mm f4 macro lens and bellows, total 300 mm extension, taken at f22 using an Olympus T28 twin-head macro flash, Brampton, Cambridgeshire, 5.viii.1991.

S. fumosa in its highly cautious approach to the dead spider. Future observations may extend the list of species of Lonchaeidae exhibiting this behaviour, and throw some light on its consistency of occurrence.

I would like to thank Peter Chandler for kindly identifying the Lonchaeidae, and Frances Murphy for identifying the spider.

REFERENCE

- Irwin, A. G. 1978. Spiders (Araneae). In: *A Dipterists handbook*. Eds A. Stubbs & P. Chandler. Amateur Entomologists' Society.

SHORT COMMUNICATION

***Icteric westermanni* (Meig.) (Diptera: Tephritidae) new to Gloucestershire, and other records.**—A single specimen of this nationally rare fly was found by Roger Gaunt at Whelford Pools Nature Reserve (SU 174996) during an invertebrate field meeting of the Gloucestershire Naturalist's Society, 7.ix.1991. Following this find, one of us (R.G.) searched the stands of ragwort for further specimens and found many more individuals. There is clearly a thriving population of the species on the reserve—an area of flooded gravel workings in the Fairford section of the Cotswold Water Park.

The distribution of this fly has recently been reviewed by Falk (1991): south-east England from Kent to Hampshire and as far north as Cambridgeshire and Norfolk. Specimens have also, however, been taken in Oxfordshire and Wiltshire by one of us (R.G.) earlier in the same year. The Gloucestershire record therefore is the furthest of these 1991 records from the published distribution. Details of the other records are as follows: Shrivenham, Oxon (SU 246877), nine swept from ragwort growing on waste ground near an operational railway line, 19.viii.1991, and Swindon, N. Wilts. (SU 142833), a disused sand-pit produced 2 on 4.viii. and 5 on 22.viii.1991.

Records of this fly were formerly sufficiently sparse for it to be listed in the British Red Data Book (Shirt, 1987), but Falk has revised its status to 'nationally notable'. Whether the recent increase in records is due to an expansion in the range of this species or just to increased interest in the family following the publication of the RESL Handbook (White, 1988) and the initiation of a national recording scheme is not clear. The new records reported here are from a part of central southern England notoriously under-recorded in the past.

We would like to record our thanks to the Gloucestershire Trust for Nature Conservation for permission to record at Whelford Pools.—R. Gabriel, 11 Tudor Walk, Walcot, Swindon, Wiltshire SN3 3DP, and K. N. A. Alexander, 22 Cecily Hill, Cirencester, Gloucestershire GL7 2EF.

REFERENCES

- Falk, S. 1991. A review of the scarce and threatened flies of Great Britain (Part 1). Research & Survey in Nature Conservation, No. 39. Nature Conservancy Council, Peterborough.
- Shirt, D. B. (ed.) 1987. *British red data books: 2. Insects*. Nature Conservancy Council, Peterborough.
- White, I. M. 1988. *Tephritid Flies. Diptera: Tephritidae. Handbk Ident. Br. Insects 10(5a)*. Royal Entomological Society of London.